

**REMARKS**

This application has been carefully reviewed in light of the Office Action of December 9, 2005, wherein:

- A. Claims 8 and 19 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention;
- B. Claims 1-6, and 12-17 were rejected under 35 U.S.C. §102(e) as being anticipated by US Patent No. 6,549,961 to Kloth; and
- C. Claims 7 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,549,961 to Kloth; and
- D. Claims 9-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 5,528,761 to Ooba et al..

**Claim Rejections – 35 U.S.C. §112**

- A. The Examiner rejected Claims 8 and 19 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Specifically, the Examiner “it is not clear what is meant by ‘generating an exception response.’” The Applicants point to page 7, lines 6-8 of the present application which describes one embodiment of the present invention where an “exception response” is generated. Particularly in light of this disclosure, the Applicants submit that the term is definite. If the Examiner requires further clarification, the Applicants respectfully request the Examiner contact the undersigned.

**Claim Rejections – 35 U.S.C. §102**

- B. Claims 1-6, and 12-17 were rejected under 35 U.S.C. §102(e) as being anticipated by US Patent No. 6,549,961 to Kloth, herein referred to as the “Kloth patent.”

*Claim 1*

In rejecting Claim 1, the Examiner stated that the Kloth patent “discloses a network switch including a plurality of processing engines (fig. 1, multiprocessor system

20 comprises a bridge 24 and a crossbar 80) comprising receiving a request from a processor 22 at block 40); assigning a semaphore to the connection (granting a semaphore 32 corresponding to an access request at block 46); storing the semaphore at the processing engines (storing semaphore in memory of bridge 24, see col. 3, lines 30-32); at one of the processing engines, receiving an internal message including a semaphore value (within a data address received, a portion of the address correspondences to a requested resource 28 is founded, see col. 3, lines 55-60); comparing the stored semaphore to the semaphore value (bridge 24 examines a portion of the data access address to determine which resource 28 the access request is intended, then bridge 24 examines semaphore 32 corresponding to the requested resource 28 to determine if the requested resource 28 is available in block 44, see col. 3, lines 59-65); and at one of the processing engines, processing the internal message based on the comparison of the stored semaphore and the semaphore value (the access is granted to processor 22 if the requested resource 28 is available, otherwise, request from the processor 22 is denied with a halt signal 34, see col. 3, line 64 – col. 4, line 3.)”

The Applicants respectfully disagree that the teachings of the Kloth patent anticipate Claim 1. In order to establish a *prima facie* case of anticipation, the Examiner must set forth an argument that provides (1) a single reference (2) that teaches or enables (3) each of the claimed elements (as arranged in the claim) (4) either expressly or inherently and (5) as interpreted by one of ordinary skill in the art. All of these factors must be present, or a case of anticipation is not met. As stated in the MPEP 2131, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). The Applicants submit that the Kloth patent does not teach, disclose, or suggest each and every element of Claim 1.

Claim 1 claims, in part, “receiving a request for a connection at the network switch; [and] assigning a semaphore to the connection.” The Applicants submit that the Kloth patent does not teach, disclose, or suggest “assigning a semaphore to the connection,” as is claimed in Claim 1.

The Examiner stated that “assigning a semaphore to the connection” is taught in the Kloth patent by “granting a semaphore 32 corresponding to an access request at block 46.” The Examiner does not cite any part of the Kloth patent to support the assertion that there is a grant of a semaphore corresponding to an access request.

Figure 2 of the Kloth patent shows block 46. Figure 2 is a flow diagram of a system for allocating a resource. First, block 40 is reception of a request to allocate a protected resource. The next step, 42 is examination of a semaphore for the requested resource. If the resource is available, as determined by block 44, access to the resource is granted in block 46 and the semaphore is updated. The Applicants find no mention in this flow diagram, or in the accompanying description in the Kloth patent, of “assigning a semaphore to the connection,” as is claimed in Claim 1.

Additionally, the Kloth patent states “a conflict results if more than one processor attempts to access the same resource at the same time. Conflicts are typically resolved through the use of semaphores. Each shared resource is assigned a semaphore.” *See* Col. 1, lines 21-25. First, the Applicants submit that a shared resource, as defined by the Kloth patent in col. 1, lines 13-14 as memory or I/O devices is not “a connection,” as is claimed in Claim 1. Second, the Examiner asserted that the semaphore 32 is granted corresponding to an access request at block 46. However, the Applicants believe that if the Examiner is correct, then the system of the Kloth patent would not work. If the semaphore 32 is granted corresponding to an access request, then the prevention of contentions among processors would be impossible. Instead, as shown in block 46, the semaphore is updated, not granted as asserted by the Examiner, corresponding to an access request.

Therefore, for the reasons submitted above, the Applicants submit that the Kloth patent does not anticipate Claim 1.

#### *Claims 2-8*

Claims 2 -8 are dependent upon Claim 1. For the reasons given above, the Applicants submit that Claim 1 is patentable over the cited prior art. Therefore, the Applicants submit that Claims 2-8 are also patentable over the cited prior art at least through their dependence upon an allowable base claim.

*Claim 12*

Claim 12 claims, in part, “a first processing engine for assigning a semaphore to one or more packets associated with a connection.” The Applicants submit that the Kloth patent does not teach, disclose, or suggest “assigning a semaphore to one or more packets associated with a connection.” The same arguments provided above with respect to Claim 1 apply to Claim 12. The Applicants submit that shared resources, as defined in the Kloth patent, are not packets associated with a connection. Additionally, the Applicants contend that the Kloth patent does not teach, disclose, or suggest “assigning a semaphore to one or more packets,” instead the Kloth patent teaches updating a semaphore in response to an access request.

Therefore, for the reasons submitted above, the Applicants submit that the Kloth patent does not anticipate Claim 12.

*Claims 13-19*

Claims 13-19 are dependent upon Claim 12. For the reasons given above, the Applicants submit that Claim 12 is patentable over the cited prior art. Therefore, the Applicants submit that Claims 13-19 are also patentable over the cited prior art at least through their dependence upon an allowable base claim.

**Claim Rejections – 35 U.S.C. §103**

D. Claims 9-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 5,528,761 to Ooba et al., herein referred to as the “Ooba patent.”

In rejecting Claim 9, the Examiner stated “[e]ven though the message command from Ooba et al. does not include an assigned semaphore, but the message command designates one or more destination processors (col. 6, lines 3-5). Therefore, it would have been obvious [to] equate assigning a semaphore to an internal message with designate one designation processor in the Ooba et al. in order to determine whether the destination processor is ready to receive [a] message.” The Applicants respectfully disagree with the conclusion drawn by the Examiner.

As noted in MPEP 706.02(j) “to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill

in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

In this case, the Examiner has not indicated where in the prior art the limitation of "at an origination processor, assigning a semaphore to an internal message associated with the packet," claimed in Claim 9, is taught, disclosed, or suggested. In fact, the Examiner admits that the message command of the Ooba patent does not include an assigned semaphore. The Examiner appears to assert that this limitation is generally available to one of ordinary skill in the art, since the Examiner has offered no other evidence to support where this limitation is taught, disclosed, or suggested. If the Examiner continues to maintain his rejection of Claim 9 as being obvious over the Ooba patent, the Applicants respectfully request that the Examiner submit an affidavit as required under 37 CFR 1.104(d)(2), see MPEP section 2144.04(c).

Additionally, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The Applicants submit that the Ooba patent specifically teaches away from combining a semaphore with the message command taught by the Ooba patent. Col. 6, lines 56-62 state "[t]he other advantage is that a quasi-software exclusive control, such as a semaphore is not required. If such an exclusive control using a shared variable causes memory access, the memory access in turn causes access to the shared bus and increases traffic on the shared bus. Unnecessary access to the shared bus adversely affects the performance of the system." (emphasis added). Therefore, the Applicants submit that the Ooba patent teaches away from combining a semaphore with the command message taught in the Ooba patent.

Therefore, for the reasons submitted above, the Applicants submit that the Ooba patent does not anticipate Claim 9.

*Claims 10-11*

Claims 10 and 11 are dependent upon Claim 9. For the reasons given above, the Applicants submit that Claim 9 is patentable over the cited prior art. Therefore, the Applicants submit that Claims 10 and 11 are also patentable over the cited prior art at least through their dependence upon an allowable base claim.

**Concluding Remarks:**


For all the foregoing reasons, reconsideration of and withdrawal of all outstanding rejections is respectfully requested. The Examiner is earnestly solicited to allow all claims, and pass this application to issuance.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 08-3038. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed. The petition fee due in connection therewith may be charged to deposit account no. **08-3038**, (referencing Docket No. **02453.0005.NPUS00**) for the requisite fee.

To expedite allowance of this case, the Examiner is earnestly invited to call the undersigned at (949) 759-5269.

Respectfully submitted,

Date: April 4, 2006

  
Robert C. Laurenson, Reg. No. 34,206

HOWREY SIMON ARNOLD & WHITE, LLP  
2041 Fairview Park Drive, **Box No. 7**  
Falls Church, VA 22042  
FAX No. (703) 336-6950  
Telephone No. (949) 721-6900